

P22042.A08

protein or its mutant, a yellow fluorescent protein or its mutant, a cyan fluorescent protein or its mutant, a red fluorescent protein or its mutant, and a blue fluorescent protein or its mutant, provided that  $n$  represents an integer of 140 to 150;

(2) a linker sequence of a sequence of 2 to 20 amino acids; and

(3) an amino acid sequence from the 1<sup>st</sup> amino acid to the  $(n-1)^{\text{th}}$  amino acid from the N-terminus of the fluorescent protein described in (1) above;

a fused fluorescent protein having the following amino acid sequences (1) to (5) in order in the direction from the N-terminus to the C-terminus, which can emit fluorescence that is dependent on  $\text{Ca}^{2+}$  ion level.

(1) an amino acid sequence of a target peptide of a calcium-binding protein;

(2) an amino acid sequence from the  $n^{\text{th}}$  amino acid from the N-terminus to the C-terminus of a fluorescent protein selected from the group consisting of a green fluorescent protein or its mutant, a yellow fluorescent protein or its mutant, a cyan fluorescent protein or its mutant, a red fluorescent protein or its mutant, and a blue fluorescent protein or its mutant, provided that  $n$  represents an integer of 140 to 150;

(3) a linker sequence of a sequence of 2 to 20 amino acids;

(4) an amino acid sequence from the 1<sup>st</sup> amino acid to the  $(n-1)^{\text{th}}$  amino acid from the N-terminus of the fluorescent protein described in (2) above; and

(5) the amino acid sequence of a calcium-binding protein;

a calcium ion indicator comprising the fused fluorescent protein;

a DNA encoding the fluorescent protein;